

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A motor, comprising:
a stator having stator gaps between stator poles and configured to produce electromagnetic flux when electrically energized;
a tube conduit positioned between the stator poles to substantially cover an entire length of the stator, wherein the outer circumference of the tube includes interlocks extending into the stator gaps; and
a rotor positioned within the tube conduit and having rotor poles and rotatable in response to the electromagnetic flux, the poles having laminations sufficiently skewed for pumping fluid through the tube conduit during rotation.
2. (Currently Amended) The motor of claim 1, wherein the interlock comprises a tongue and groove to affix the tube to the stator poles ~~conduit comprises a tube.~~
3. (Currently Amended) The motor of claim 2, wherein the interlock comprises a crimp to affix the tube to the stator poles ~~tube is affixed to the stator poles.~~
4. (Currently Amended) The motor of claim 3, wherein the stator poles are skewed to match the rotor poles, and wherein the outer circumference of the tube includes interlocks are skewed to match the stator poles.
5. (Original) The motor of claim 2, wherein the tube is formed from plastic.
6. (Original) The motor of claim 2, wherein the tube is formed from metal.
7. (Original) The motor of claim 2, wherein the tube is non-magnetic.

8.-9. (Canceled)

10. (Original) The motor of claim 1, wherein the rotor includes a coating.

11. (Original) The motor of claim 1, wherein the motor comprises a switched reluctance motor.

12. (Original) The motor of claim 1, wherein the motor comprises an induction motor.

13. (Original) The motor of claim 1, wherein the motor comprises a permanent magnet synchronous motor.

14. (Original) The motor of claim 1, wherein the motor comprises a salient pole synchronous motor.

15. (Original) The motor of claim 1, wherein the motor comprises a DC motor.

16. (Original) The motor of claim 1, wherein the conduit provides a substantially air-tight seal for the fluid to flow along the rotor.

17. (Currently Amended) A motor having skewed rotor laminations for pumping fluid, the motor comprising:

a fixed stator having stator gaps between stator poles;

a rotatable rotor having sufficiently skewed laminations to move fluid when rotated; and

a tube conduit positioned between the stator and the rotor for substantially directing the moved fluid, wherein the tube substantially covers an entire length of the stator

and wherein the outer circumference of the tube includes interlocks extending into the stator gaps.

18. (Currently Amended) The motor of claim 20, wherein the stator poles are skewed to match the rotor poles, and wherein the interlocks are skewed to match the stator poles. ~~the conduit comprises a tube affixed to the stator.~~

19. (Currently Amended) A method for pumping fluid, the method comprising:

providing a motor having a stator and a laminated rotor rotatable relative to the stator;

skewing the rotor laminations sufficiently to pump fluid through the motor when the rotor rotates;

rotating the rotor to pump the fluid; and

confining the fluid around the rotor as the fluid is pumped with a tube positioned between the stator and the rotor for substantially directing the moved fluid, wherein the tube substantially covers an entire length of the stator and wherein the outer circumference of the tube includes interlocks extending into the stator gaps.

20. (Currently Amended) The method of claim 19, further comprising skewing the stator poles to match the rotor poles, and skewing the interlocks to match the stator poles. ~~further comprising the conduit comprises a tube affixed to the stator confining the fluid with a conduit that produces a substantially air-tight seal as the fluid flows around the rotor and collecting reliable flow data on the pumped fluid.~~

21. (New) The method of claim 20 further comprising press-fitting the tube into the stator to affix the tube thereto.

22. (New) The method of claim 21 wherein press-fitting comprises rotating the tube while pressing the tube into the stator to facilitate aligning the skewed interlocks with the skewed stator poles during the press-fitting.

Remarks

In response to the Office Action mailed April 23, 2003, Applicant respectfully requests reconsideration and allowance of the application in view of the amendments above and the remarks below. Claims 1-4 and 17-20 have been amended, claims 8-9 are canceled, and claims 21-22 are new.

Objection To The Drawings Under 37 C.F.R. 1.83(a)

The drawings are objected to as failing to show every feature of the invention specified in the claims, *i.e.*, the induction motor with skewed rotor laminations, the permanent magnet motor with skewed rotor laminations, the salient pulse synchronous motor, and the method of collecting reliable data and the apparatus to collect data on the fluid flow.

MPEP § 608.02(d) states that “any structural detail that is of sufficient importance to be described should be shown in the drawing.” Applicant respectfully requests that the induction motor with skewed rotor laminations, and the salient pole synchronous motor are not structural detail that is important enough to be shown in the drawing. One of ordinary skill in the art understands this terminology. The method of collecting reliable data and the apparatus to collect reliable data has been canceled from claim 20.

Rejection Of Claims 12-14 and 20 Under 35 U.S.C. 112, First Paragraph

In this rejection, the Examiner rejects claims 12-14 and 20 for failing to demonstrate that the inventor had possession of the claimed invention and that the specification failed to enable one skilled in the art to make and use the claimed invention. The rejected claims relate to the limitations recited above with respect to the objection to the drawings, which included the claim limitations directed toward the induction motor with skewed rotor laminations, the permanent magnet motor with skewed rotor laminations, the salient pole synchronous motor, and the method of collecting reliable data and the apparatus to collect reliable data on the fluid flow.

With respect to possession of the claimed invention, MPEP § 2163 states that “If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met.” Applicant asserts that the nuances of claims 12-14 and amended claim 20 do not need to be explicitly described in the specification.

With respect to enablement, MPEP § 2164.01 states that “the standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, which postured the question: Is the experimentation needed to practice the invention undue or unraisable? That standard is still the one to be applied.” Applicant respectfully contends that the subject matter recited in claims 12-14 and 20 would not require undue experimentation to practice the invention.

***Rejection Of Claims 1, 8-12, 14-17,
And 19 Under 35 U.S.C. 102(b) Over Hatusda***

Claim 1 has been amended to include “a tube positioned between the stator poles to substantially cover an entire length of the stator, wherein the outer circumference of the tube includes interlocks extending into the stator gaps.” *Hatusda* fails to teach this limitation of claim 1.

Hatusda, as conceded by the Examiner, only discloses a packed stator 9. (Paper No. 0403, page 2.) As such, independent claim 1 and dependent claims 8-12 and 14-16 which depend therefrom, are patentable over *Hatusda*. Independent claims 17, 19, and new claims 21-22 include a “tube,” and are patentable for at least the same reasons that claim 1 is patentable.

***Rejection Of Claims 1-4, 7-9, 13-14,
And 16-19 Under 35 U.S.C. 102(b) Over Takura***

Claim 1 has been amended to include “a tube position between the stator poles to substantially cover an entire length of the stator, wherein the outer circumference of the tube includes interlocks extending into the stator gaps.” *Takura* fails to teach this limitation of claim 1.

Takura only discloses a separate part of fluid guide devices which do not “substantially cover an entire length of the stator.” (Col. 6, ll. 38-42.) Moreover, *Takura* fails to suggest including “interlocks” on the fluid guides. As such, independent claim 1 and dependent claims 2-4, 7-9, 13-14, and 16 which depend therefrom are patentable over *Takura*. Claims 17-19 and new claims 21-22 include a “tube” and an “interlock,” and are patentable for at least the same reasons that claim 1 is patentable.

***Rejection Of Claims 1-7, and 9-20 Under
35 U.S.C. 103(a) As Being Unpatentable Over Schöb And Stanley***

Claim 1 has been amended to include “a tube positioned between the stator poles to substantially cover an entire length of the stator, wherein the outer circumference of the tube includes interlocks extending into the stator gaps.” Absent improper hindsight drive from Applicant’s invention, one of ordinary skill in the art would fail to find any motivation, suggestion, or incentive to incorporate the teachings of *Schöb* with the teachings of *Stanley* to teach this limitation of claim 1. *Schöb* relates to problems with pumping fluid. In contrast, *Stanley* relates to noise problem created by running an electric motor.

Even if *Schöb* and *Stanley* were improperly combined, such a combination would fail to teach the above quoted limitation of claim 1. *Schöb* and *Stanley* fail to provide any suggestion, motivation, or incentive to include “interlocks” with the tube as recited in claim 1. As such, claim 1 and claims 6-7 and 9-16 which depend therefrom are patentable even over an improper combination of *Schöb* and *Stanley*. Claims 17-20 and new claims 21-22 include “interlocks” with the tube, and are patentable for at least the same reasons that claim 1 is patentable.

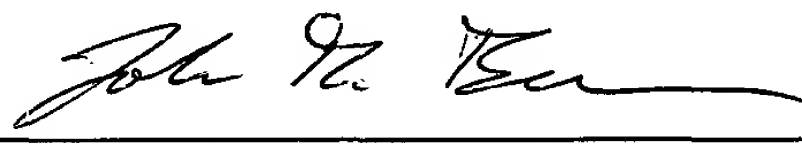
CONCLUSIONS

In view of the foregoing, Applicant respectfully requests reconsideration of the rejections and that the case pass to issue. The Examiner is invited to call the undersigned at the number listed below if the remarks and amendments enclosed herewith are insufficient to pass the case to issue.

Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978 -- a duplicate of this paper is enclosed for that purpose.

Respectfully submitted,

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